

Model Development Phase

Date	13 June 2025
Team ID	SWTID1749627644
Project Title	Human Resource Management: Predicting Employee Promotions using Machine Learning
Maximum Marks	5 Marks

Feature Selection Report:

In the forthcoming update, each feature will be accompanied by a brief description. It will indicate whether it's selected or not, providing reasoning for their decision. This process will streamline decision-making and enhance transparency in feature selection.

Feature	Description	Selected (Yes/No)	Reasoning
employee_id	Unique identifier for each employee	No	Employee ID is not required to predict their performance
department	Department where the employee works	Yes	Department may affect promotion trends and opportunities
region	Geographical region of employment	No	May introduce noise and is less relevant to promotion decisions
education	Highest educational qualification	Yes	Education can impact eligibility and chances for promotion

gender	Gender of the employee	No	Can introduce bias, best to avoid unless analyzing fairness
recruitment_channel	How the employee was hired	No	Not a strong predictor
no_of_trainings	Number of trainings completed in the last year	Yes	Indicates employee development and interest in growth
age	Age of the employee	Yes	Can relate to experience and maturity
previous_year_rating	Employee's rating in the previous year	Yes	Direct performance indicator and is highly relevant
length_of_service	Years the employee has worked in the company	Yes	Indicates organizational experience and loyalty
KPIs_met >80%	Whether >80% of KPIs were met	Yes	Indicates strong performance
awards_won?	Whether the employee won awards in the last year	Yes	Recognized employees are more likely to be promoted
avg_training_score	Average score in training assessments	Yes	Measures learning effectiveness and capability

is_promoted	Whether the employee got promoted (Target variable)	Yes	Target variable used for training the model
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